

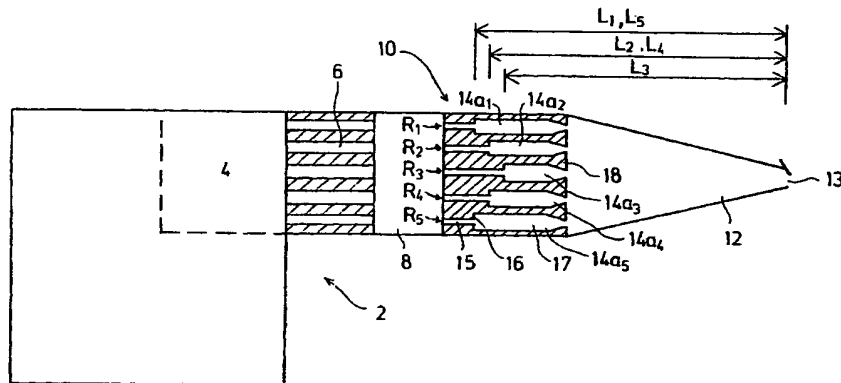
(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
12 April 2001 (12.04.2001)

PCT

(10) International Publication Number
WO 01/25532 A1

- (51) International Patent Classification⁷: **D21F 1/02**
- (21) International Application Number: **PCT/FI00/00843**
- (22) International Filing Date: **2 October 2000 (02.10.2000)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
19992133 4 October 1999 (04.10.1999) **FI**
- (71) Applicant (for all designated States except US): **METSO PAPER, INC. [FI/FI];** Fabianinkatu 9 A, FIN-00130 Helsinki (FI).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **SOINI, Sakari [FI/FI];** Kermisenkuja 5 C 16, FIN-31400 Somero (FI).
- (74) Agent: **FORSSÉN & SALOMAA OY; Yrjönkatu 30, FIN-00100 Helsinki (FI).**
- (81) Designated States (national): **AE, AG, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, DZ, EE, EE (utility model), ES, FI, FI (utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR (utility model), KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.**
- (84) Designated States (regional): **ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).**
- Published:
— With international search report.
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **PROCEDURE AND MEANS FOR GENERATING TURBULENCE IN STOCK SUSPENSION FLOW**

(57) Abstract: The present invention relates to a procedure for generating and maintaining turbulence in a stock suspension flow being conducted through a turbulence generator (10) into the slice duct (12) of the headbox and therefrom through a slice opening (13) to the web former. The invention also relates to the turbulence generator, comprising a number of superimposed turbulence pipes (14a_n) arranged in rows (R_n) extending across the entire width of the headbox. The stock suspension flow is with the aid of the turbulence pipes (14a_n) distributed into several superimposed layers, and the impact of the turbulence generating and maintaining elements (16) is directed thereto, for which elements the stepped expansion spots (16) of the flow cross-section area of a turbulence pipe (14) are used, and/or the trailing elements starting from between the pipe rows (R_n) and extending to the slice duct (12) of the headbox. In different layers of the flow, turbulence is generated in different phases of the flow by arranging said expansion spots (16) and/or the trailing elements in superimposed layers to be located at different distances from the slice opening (13) of the headbox, whereby a different turbulence prevails at the slice opening (13) in different layers of the stock suspension flow.